

REMARKS

The undersigned attorney thanks the Examiner for the further comments. Applicant respectfully requests reconsideration of this Patent Application, particularly in view of the above Amendment and the following remarks. No additional claim fee is due for this Amendment because the number of independent claims remains unchanged and the total number of claims is not more than originally filed.

Request for Telephone Interview

Applicant believes the prosecution of this Patent Application would benefit from a telephone interview, and requests the Examiner contact the undersigned at (847) 490-1400 to schedule a telephone interview.

Amendment to the Claims

Applicant has amended Claim 1 to include limitations of Claim 11, now canceled.

Applicant has amended Claim 30 to recite a plurality of vias, that the coil connections and magnetic core are both formed from these vias, and also to include limitations of Claim 40. Support for this Amendment can be found in Claims 31 and 33, now canceled, and at, for example, page 5, first and second paragraphs. Claims 32, 34, and 35 have been amended to correct claim dependencies in view of canceled Claim 31.

No new matter has been added by this Amendment.

Claim Rejections - 35 U.S.C. §102

The rejection of Claim 1 under 35 U.S.C. §102(b) as being anticipated by Lipkes et al., U.S. Patent 5,945,920, is rendered moot by the above Amendment. Amended Claim 1 includes limitations of dependent Claim 11.

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The rejection of Claims 30-31 under 35 U.S.C. §102(b) as being anticipated by Klude et al, U.S. Patent 6,480,086, Ushiro, U.S. Patent 5,552,756, or Lipkes et al., U.S. Patent 5,945,920, is rendered moot by the above Amendment. Amended Claim 30 includes limitations of dependent Claim 40.

Claim Rejections - 35 U.S.C. §103

The rejection of Claims 2-4, 11, 12, 28, 29, 32-35, 39, 41, and 42 under 35 U.S.C. §103(a) as being obvious over Lipkes et al., U.S. Patent 5,945,920, in view of Imam, US 2002/0097128, is respectfully traversed.

Claims 2-4, 12, 28, 29, 32-35, 39, 41, and 42 depend from one of amended Claims 1 and 31. Claims 1 and 31 have been amended to include limitations of Claims 11 and 40, respectively, and will be discussed here.

Imam discloses an inductive element for integration into an integrated circuit (IC) ([0005]). As discussed in the previous Amendment, the inductor of Imam is structurally different than Applicant's inductor.

The Office Action now cites Lipkes et al., and alleges that it would have been obvious for one of ordinary skill in the art to make the device of Lipkes et al. with the sizes and materials of Imam to make the Lipkes et al. device compatible for IC fabrication. One skilled in the art would clearly understand from reading Lipkes et al. that it does not teach or suggest an inductor that can be used in IC fabrication. Lipkes et al.'s fabrication involves "sintering," "firing," "screen printing," "ceramic wafers," and "conduct ink" (Col. 1, line 54-Col. 2, line 13), none of which are IC technologies, and clearly indicate to the skilled artisan that Lipkes et al. is not directed to IC fabrication.

Another clear indicator that Lipkes et al. is not relevant to IC fabrication is in Lipkes et al.'s desired dimensions of "one-half to one inch per side." The inductor of Lipkes et al. is significantly larger than the micrometer sizes necessary for

IC fabrication (*See* page 3, last paragraph, of Applicant's Specification). Applicant has amended the independent claims to recite a footprint size of $75 \times 75 \mu\text{m}$ or less to reiterate that Applicant's inductor is for use in IC fabrication.

The Office Action perhaps reflects the fact that Lipkes et al. is not suitable for, or at all directed or intended for, IC fabrication, and thus applies Imam. However, the idea that the sizes and materials needed for inductors for IC fabrication are merely obvious design choices in view of Imam is incorrect. First, the reduction in size is substantial, going from an inch to less than $75 \mu\text{m}$. Such a large reduction in size cannot be simply called an "obvious design consideration," at least without further support in the art. This difference of size is also not based upon "desired inductance and cost parameters" as alleged on page 4 of the Office Action. The difference in size is based upon a different device for a very different use.

Furthermore, Imam teaches away from the idea that the difference in size and materials are obvious design choices that can be applied to Lipkes et al. Imam identifies in paragraph [0004] that an inductor cannot be simply made smaller to be applied to integrated circuits. One skilled in the art would not agree that one can simply make the structure of Lipkes et al. useful for IC fabrication by merely substituting materials and making it smaller, particularly given the complication and high level of skill needed to go from a size measured using an inch scale to a size measured on a micron scale.

In view of the above, Applicant respectfully asserts that Applicant's invention is not obvious over the combination of Lipkes et al. and Imam, as there is no teaching or suggestion to, or how to, apply Lipkes to IC fabrication. Given the complexity of forming an inductor of the micron size of Applicant's inductor, there would also have been no expectation of success.

Also, in regards to Claim 30, none of the prior art references, alone or in any combination, teach or suggest using vias to form both the spiral electrical connectors and the magnetic core from the same plurality of vias.

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In view of all the above comments, favorable reconsideration and withdrawal of this rejection are respectfully requested.

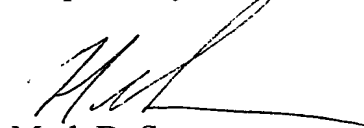
The rejection of Claims 7, 10, and 39 under 35 U.S.C. §103(a) as being obvious over Lipkes et al., U.S. Patent 5,945,920, in view of Imam, U.S. Publication 2002/0097128, and further in view of Abel, U.S. Patent 6,198,374, is respectfully traversed. Claims 7, 10, and 39 depend from one of amended Claims 1 and 31, and are thus patentable for at least the same reasons discussed above. Abel does not make up for the deficiencies of the combination of Lipkes et al. and Imam.

Conclusion

Applicant intends to be fully responsive to the outstanding Office Action. If the Examiner detects any issue which the Examiner believes Applicant has not resolved in this response, Applicant's undersigned attorney requests a telephone interview with the Examiner.

Applicant sincerely believes that this Patent Application is now in condition for allowance and, thus, respectfully requests early allowance.

Respectfully submitted,



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